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Notice of Allowability

Application No.

10/607,778

Examiner

Huedung X. Cao

Applicant(s)

HE ET AL.

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2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment, filed on 02/21/05.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☒ The drawings filed on 27 June 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

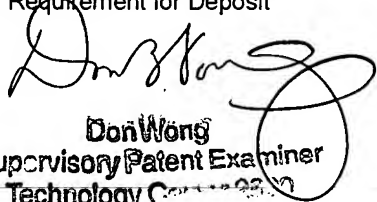
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Don Wong
Supervisory Patent Examiner
Technology Center

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Wei Te Chung (Reg. No. 43,325) on 03/07/2005.

The application has been amended as follows:

In claim 14 (twice amended) A multi-band antenna comprising:

a rectangular insulative substrate defining a lengthwise edge and a lateral edge;

a conductive element formed on the substrate and having thereof an overall dimension similar to said substrate, said conductive element including a small first radiating patch and a large second radiating patch separated from each other by a generally L-shaped non-conductive gap, said gap being equipped with thereof two opposite ends terminating at said lengthwise edge and said lateral edge, respectively; and

a coaxial cable including an inner conductor and an outer conductor respectively connected to the first radiating patch and the second radiating patch around said lateral edge.

In claim 15 (once amended) the multi-band antenna as claimed in claim 14, wherein said generally L-shaped non-conductive gap includes a long section parallel to said lengthwise edge and a short section parallel to said lateral edge.

In claim 16 (once amended) the multi-band antenna as claimed in claim 15, wherein said generally L-shaped non-conductive gap further includes another short section extending from a joint section of said long section and said short section and opposite to said long section.

Examiner's Statement of Reasons for Allowance

3. Claims 1-16 are allowed.

4. The following is an examiner's statement of reasons for allowance:

The prior art made of record fails to anticipate or make obvious the claimed invention. Specifically, the prior art fails to teach, in combination with the remaining elements as recited in claims 1, and 14:

The present invention is directed to a multi-band antenna.

Regarding claims 1, Prior Arts fail to specifically teach that the conductive element comprising a first part resonating at a first frequency band and a second part resonating at a second frequency band, the first part and the second part being disconnected with each other by a non-conductive gap.

Regarding claim 14, Prior Arts fail to teach conductive element formed on the substrate and having thereof an overall dimension similar to said substrate, said

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conductive element including a small first radiating patch and a large second radiating patch separated from each other by a generally L-shaped non-conductive gap, said gap being equipped with thereof two opposite ends terminating at said lengthwise edge and said lateral edge, respectively;

Claims 2-13, and 5-8 are allowed for depending on claim 1.

Claims 15-16 are allowed for depending on claim 14.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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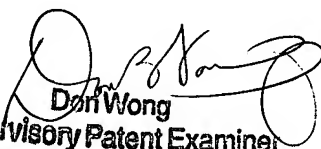
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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huedung Cao whose telephone number is (571) 272-1939.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Huedung Cao
Patent Examiner


Don Wong
Supervisory Patent Examiner
Technology Center 2800